

ICMR Summer School on Novel Superconductors  
University of California, Santa Barbara  
August 2 – August 15, 2009

| WEEK 1  |   |
|---|---|
| Sunday, August 2, 2009 – Loma Peloma, Manzanita Village |   |
| 6:00 pm to 8:00 pm                                      | Reception and Registration  |
| Monday, August 3, 2009                                  |   |
| 8:00 am to 9:00 am                                      | Breakfast at the Carrillo Dining Commons  |
| 9:00 am to 10:30 am                                     | Sacha Balatsky – Overview of BCS Theory (ESB 1001)  |
| 10:30 am to 11:00 am                                    | Break   |
| 11:00 am to 12:30 pm                                    | Paul Canfield (via video conference) Growth of novel materials (including some superconductors) (MRL 2053)                            |
| 12:30 pm to 1:30 pm                                     | Lunch at the De La Guerra Dining Commons  |
| 2:00 pm to 3:30 pm                                      | Poster Session (MRL Ground Floor Patio)   |
| 3:30 pm to 5:00 pm                                      | Mac Beasley - Overview of the Ginzburg Landau Theory, the Josephson Effect and Their Applications to Novel Superconductors (MRL 2053) |
| 5:00 pm to 6:00 pm                                      | Dinner at the Carrillo Dining Commons   |
| Tuesday, August 4, 2009                                 |   |
| 8:00 am to 9:00 am                                      | Breakfast at the Carrillo Dining Commons  |
| 10:00 am to noon  | KITP technical talk – TBA (KITP)  |
| 12:00 pm to 1:30 pm                                     | Lunch at the De La Guerra Dining Commons  |
| 1:30 pm to 3:00 pm                                      | Warren Pickett - Electron-Phonon Coupling: when Conventional Becomes Unconventional (ESB 1001)  |
| 3:00 pm to 3:30 pm                                      | Break   |
| 3:30 pm to 5:00 pm                                      | Sacha Balatsky - Local effects in BCS and unconventional superconductors (ESB 1001)   |
| 5:30 pm to 6:30 pm                                      | Dinner at the Carrillo Dining Commons   |
| Wednesday, August 5, 2009                               |   |
| 8:00 am to 9:00 am                                      | Breakfast at the Carrillo Dining Commons  |
| 9:00 am to 10:30 am                                     | David Singh- Introduction to Iron Based Superconductors: Electronic Structure and Magnetism (ESB 1001)                                |
| 10:30 am to 11:00 am                                    | Break   |
| 11:00 am to 12:30 pm                                    | Paul Canfield - (via video-conference) Superconductivity in the post copper oxide age (MRL 2053)                                      |
| 12:30 pm to 2:00 pm                                     | Lunch at the De La Guerra Dining Commons  |

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|                                     | FREE AFTERNOON   |
| 5:30 pm to 6:30 pm                  | Dinner at the Carrillo Dining Commons  |
| Thursday, August 6, 2009            |  |
| 8:00 am to 9:00 am                  | Breakfast at the Carrillo Dining Commons   |
| 10:00 am to noon                    | KITP Technical Talk TBA (KITP)   |
| 12:00 pm to 1:30 pm                 | Lunch at the De La Guerra Dining Commons (Lunch served from 11:30 - 1:30)  |
| 1:30 pm to 3:00 pm                  | Peter Hirschfeld - Spin fluctuation pairing models of ferropnictide materials and phenomenology of highly anisotropic pairing states, ESB 1001 |
| 3:00 pm to 3:30 pm                  | Break  |
| 3:30 pm to 5:00 pm                  | Claudia Felser - FeSe - a simple superconductor? ESB 1001  |
| 7:00 pm to 9:00 pm                  | Banquet Dinner at El Paseo Restaurant in Downtown Santa Barbara<br>Bus will depart from Manzanita Village at 6:30PM                            |
| Friday, August 7, 2009              |  |
| 8:00 am to 9:00 am                  | Breakfast at Carrillo Dining Commons   |
| 9:00 am to 10:30 am                 | Paul Chu) - The Excitements and Agonies in the Long Search for Novel Superconductors with Higher Tc's (ESB 1001)                               |
| 10:30 am to 11:00 am                | Break  |
| 11:00 am to 12:30 pm                | Alex Gurevich - Designing superconducting materials for applications (ESB 1001)  |
| 12:30 pm to 1.30 pm                 | Lunch at the De La Guerra Dining Commons   |
|                                     | FREE AFTERNOON   |
| 5:30 pm to 6:30 pm                  | Dinner at Carrillo Dining Commons  |
| Saturday, August 8, 2009 – Free Day |  |
| 8:00 am to 9:00 am                  | Breakfast at the Carrillo Dining Commons   |
| 5:30 pm to 6:30 pm                  | Dinner at the Carrillo Dining Commons  |

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| WEEK 2                            |   |
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| Sunday, August 9, 2009 – Free Day |   |
| 8:00 am to 9:00 am                | Breakfast at the Carrillo Dining Commons  |
| 5:30 pm to 6:30 pm                | Dinner at the Carrillo Dining Commons   |
| Monday, August 10, 2009           |   |
| 8:00 am to 9:00 am                | Breakfast at the Carrillo Dining Commons  |
| 9:00 am to 10:30 am               | Bernd Buchner - Phase Diagram of Pnictide Superconductors; Interplay between magnetism, structure and superconductivity (ESB 1001)                  |
| 10:30 am to 11:00 am              | Break   |
| 11:00 am to 12:30 pm              | Peter Hirschfeld - Defects in correlated metals and superconductors (ESB 1001)  |
| 12:30 pm to 1.30 pm               | Lunch at the De La Guerra Dining Commons  |
| 2:00 pm to 3:30 pm                | Laura Greene - Planar Tunneling on HTS Cuprates, MRL 2053   |
| 3.30 pm to 5.00 pm                | Poster Session, MRL Ground Floor Patio  |
| 5.00 pm to 6.00 pm                | Dinner at Carrillo Dining Commons   |
| Tuesday, August 11, 2009          |   |
| 8:00 am to 9:00 am                | Breakfast at the Carrillo Dining Commons  |
| 10:00 am to noon                  | KITP Technical Talk TBA (KITP)  |
| 12:00 pm to 1:30 pm               | Lunch at the De La Guerra Dining Commons  |
| 1:30 pm to 3:00 pm                | Bernd Buchner - Electronic properties of Pnictide superconductors; mainly results from spectroscopy (ESB 1001)                                      |
| 3:00 pm to 3:30 pm                | Break   |
| 3:30 pm to 5:00 pm                | Brian Maple - Interplay between superconductivity and magnetism in f-electron systems (ESB 1001)  |
| 5:15 pm to 6.15 pm                | Dinner at the Carrillo Dining Commons   |
| Wednesday, August 12, 2009        |   |
| 8:00 am to 9:00 am                | Breakfast at the Carrillo Dining Commons  |
| 9:00 am to 10:30 am               | Brian Maple - Unconventional superconductivity, magnetic and charge order, and quantum criticality in heavy fermion f-electron materials (ESB 1001) |
| 10:30 am to 11:00 am              | Break   |
| 11:00 am to 12:30 pm              | Laura Greene - Point contact spectroscopy in heavy fermions (ESB 1001)  |
| 12:30 pm to 2:00 pm               | Lunch at De La Guerra Dining Commons  |

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| 3:30 pm to 5:00 pm        | Catherine Kallin - chiral p-wave superconductivity and strontium ruthenate (ESB 1001)                              |
| 5:15pm to 6.15 pm         | Dinner at the Carrillo Dining Commons  |
| Thursday, August 13, 2009 |  |
| 8:00 am to 9:00 am        | Breakfast at the Carrillo Dinning Commons  |
| 10:00 am to noon          | KITP Technical Talk – TBA (KITP)   |
| 12:00 pm to 1:30 pm       | Lunch at De La Guerra Dining Commons (Lunch served from 11:00 – 2:00)  |
| 1:30 pm to 3:00 pm        | Antoine Georges - Key puzzles from HTS cuprates: a view from theory (ESB 1001)                                     |
| 3:00 pm to 3:30 pm        | Break  |
| 3:30 pm to 5:00 pm        | Steve Kivelson - What are the optimal conditions for high temperature superconductivity? (ESB 1001)                |
| 5:15 pm to 6.15 pm        | Dinner at the Carrillo Dining Commons and Free Time  |
| Friday, August 14, 2009   |  |
| 8:00am to 9:00 am         | Breakfast at Carrillo Dinning Commons  |
| 9:00 am to 10:30 am       | Jan Zaanen - Quantum criticality and superconductivity (ESB 1001)  |
| 10:30 am to 11:00 am      | Break  |
| 11:00 am to 12:30 pm      | Ole Andersen - Band structures of known families of HTSC cuprates; can we engineer them to get further? (ESB 1001) |
| 12:30 pm to 2:30 pm       | BBQ Lunch at the Marine Science Building 2 <sup>nd</sup> Floor Terrace   |
| 5.15 pm to 6.15 pm        | Dinner at the Carrillo Dining Commons  |
| Saturday, August 15, 2009 |  |
| 8:00 am to 9:00 am        | Breakfast at Carrillo Dinning Commons  |
| 8:00 am to 12:00 pm       | Check Out from Manzanita Village   |